REMARKS

Careful consideration has been given by the applicants to the Examiner's comments and rejection of the claims, as set forth in the outstanding Office Action, and favorable reconsideration and allowance of the application, as amended, is earnestly solicited.

Applicants note the Examiner's response to the previously submitted arguments, and that in view of the prior art cited herein, the claims are again rejected as being unpatentable, as discussed hereinbelow.

Furthermore, Claims 5-7 have been objected to under 37 C.F.R. §1.75(c) inasmuch as these are improperly dependent from cancelled Claim 3, and in order to obviate and render moot this particular ground of objection, these claims are now dependent either directly or indirectly from Claim 8, which has been added to the application in lieu of previously cancelled Claim 3. This, in effect, should now provide the appropriate dependencies, whereby Claim 7 has also been made dependent upon either Claim 5 or 6.

Furthermore, in order to clearly and patentably distinguish over the art, Claim 1 has been extensively amended so as to overcome the rejection as being unpatentable under 35 U.S.C. §103(a) over Robinson, et al., U.S. Patent No. 5,412,254, in view of Cronson, U.S. Patent No. 3,748,528, which prior art references the Examiner has extensively discussed in the Office Action.

However, careful consideration of this art indicates that the claims, as amended and presented herein, patentably distinguish thereover.

In order to more clearly define the inventive subject matter, the introductory portion of Claim 1 has been simplified by indicating a plurality of series circuits of charge storage means, consisting of the respective charge storage means (12) and a discharge spark gap (13) which are connected in series with each other.

Concerning the foregoing, in order to clarify the terminology in Claim 1, the term "an untriggered discharge spark gap (13)" has been amended to read --a self-triggering discharge spark gap (13)--. This terminology is supported in the specification on Page 2, Line 16.

In the claims, various features from Claim 3, which were previously incorporated into Claim 1, have been deleted, and newly introduced is the feature that the inductivity comprising the series inductor (19) is connected between the end of the discharge spark gap (13) which is distant or remote from the charge storage means (12) and the antenna (21). This particular feature is clearly described on Page 4, Lines 25-30 of the specification in conjunction with Figure 1 of the drawings.

Furthermore, another feature has been incorporated into Claim 1, wherein the series conductor or conductivity (19) is installed or respectively, configured so as to cause a decoupling or disconnection to each other in parallel connected charge storage means (12), in that, due to the connecting-through of a first discharge spark gap (13), there should also not be triggered all of the other discharge spark gaps (13) for their connecting-through, but should only be connected-through due to their individual response behavior, which leads to an uncorrelated activation or initiation of the discharge currents. This feature is also supported by the description in the specification on Page 2, Line 27 through Page 3, Line 5.

Furthermore, formal amendments have also been implemented to the dependent claims, wherein, as previously indicated, new Claim 8 corresponds to originally filed Claim 3, and which is dependent from amended Claim 1.

Claim 5 has been amended to clarify its meaning through insertion of the term "wherein", which emphasizes the distinctive features, wherein Claim 7 has now been amended to be dependent from either Claim 5 or Claim 6.

Through the amendment to Claim 1, there is now more clearly elucidated the nucleus or core concept of the present invention. The core of the invention resides in creating a microwave generator for high-energetic microwave radiation through an antenna, which is connected to a common discharge circuit. For this purpose, there is provided a number of series circuits consisting of charge storage means (12) and discharge spark gaps (13), which are connected in parallel with each other, and an inductivity (19), in essence, such as a series inductor (19) which is connected in parallel with the series circuits, as described on Page 4, Lines 28-30 of the present specification. The discharge spark gaps (13), as well as the series inductor or inductivity (19) are located on one side on a common, fixed potential (bus bar 14). After a sufficient charging up of the charge storage means (12) through their charging resistors (17), this then leads to a not completely concurrent short-circuit of all capacitances (12), i.e., charge storage means, through their individual discharge spark gaps (13) and the inductivity (19) which is common to all discharge circuits.

Hereby, an important feature of the inventive microwave generator resides in that the discharge spark gaps (13) are <u>self-triggering</u>, which means that they connect-through exclusively due to their individual response behaviors across their respective discharge spark gaps. The term "self-triggering", in this instance, describes finally the same condition as the

originally employed term "untriggered", which means that the connecting-through of the discharge spark gaps (13) is not triggered from externally. The term "self-triggering" formulates or defines this condition in a positive sense, and moreover, signifies that the respective discharge spark gaps (13) connect-through exclusively on the basis of their respective individual response behaviors. Due to this reason, the term "untriggered" has been replaced by the somewhat clearer term "self-triggering".

Inasmuch as the discharge sequences are self-controlling, in effect, the charge storage means (12) are discharged in an uncorrelated manner through their individual spark gaps (13), in the absence of any kind of functional or operative coupling, this, accordingly, leads to a slight time-wise offset in the responses of the individual untriggered through-connecting discharge spark gaps (13), and thereby to a stochastic slightly mutually time displaced superposition of the short-circuit currents through the common discharge inductivity (19) of the inventive microwave generator. Because of this stochastic superposition, the microwave impulse is spectrally wide-banded, which leads to a particularly effective disruption or, in essence, destruction of electronic circuits (see Page 3, Lines 22 through Page 4, Line 10 of the description).

The invention, as claimed herein, thus clearly distinguishes over the art as follows:

In contrast with the microwave generator of the present invention, the arrangement disclosed in Robinson, et al., U.S. Patent No. 5,412,254, possesses externally triggered discharge spark gaps (cavities) 27. It can be clearly ascertained from Robinson, et al.'s Figure 1 in connection with Column 3, Lines 46-49, that all of the spark gaps 27 between the applicable electrodes 25, 28 of the pulse generators 12 are excited absolutely concurrently through the common trigger generator 9 for a spark discharge. As a result thereof, in the

arrangement of Robinson, et al., this cannot lead to the randomly-required minimal opposite offset in the initiation of the individual discharge currents, such as is characteristic to the present invention.

In view of the foregoing, per se, the microwave generator, according to amended Claim 1 of the present application is already unique and inventive in clear comparison with the disclosure of Robinson, et al.

However, even in the unlikely event that, for example, the pulse generators 12 of the arrangement in Robinson, et al. were not to be triggered by the common trigger generator 9, then the high-voltage pulse generator of Robinson, et al. would not be capable of generating a stochastically slight opposite time-displaced superposition of short-circuit currents. This, among other aspects, is substantiated in that the arrangement of Robinson, et al. does not possess any conductivity in the sense of the present invention.

With regard to the coaxial cables 7, 8 disclosed in Robinson, et al., which are deemed by the Examiner as anticipating the inventive inductivity 19, these, in essence, pertain to inductive elements; however, they are connected with the end of the charge storage 15 which is distant from the spark gap 27, and not as in Claim 1 of the present invention, with that particular end of the spark gap, which is distant from the charging storage.

In other words, in the sequence of the series of Robinson, et al., there are provided the electrical components consisting of: 1) inductivity (coaxial cables 7, 8); 2) discharge spark gap 27; and 3) antenna, whereas, contrastingly, in the microwave generator pursuant to the present invention, the series sequence of the electrical components is as follows: 1) discharge spark gap (13); 2) inductivity (19); and 3) antenna (21).

As to whether the transmission line 30 of the pulse generators 12 in Robinson, et al. evidences a mentionable inductivity, cannot be ascertained by itself from Robinson, et al. In Column 3, Line 28 of Robinson, et al., the transmission line 30 is identified merely as an electrical conductor. To consider a description of a mere electrical conductor in the reference, as being the equivalent in the present disclosure of an electrical switching or control circuit with an inductivity, represents in every instance, a non-analogous ex post facto analysis, which is clearly inapplicable, inasmuch as otherwise, a mere representation of a closed conductor loop consisting of copper wire would always seem to anticipate any logically thought of series arrangements of electrical components, inasmuch as every piece of the copper wire possesses an ohmic resistance, to a small measure, an inductivity, and to an even smaller measure, also a capacitance. That kind of correlation would not be considered applicable by one skilled in the art, and thus, does not render the invention obvious.

However, at least from the Robinson, et al. publication there cannot be deemed to be disclosed any inductivity, which is so configured, (meaning that it possesses the required magnitude) in order to fulfill the purpose of the present invention, namely, to effectuate a decoupling of the mutually parallel connected charging storage means to such an extent that by means of a first connecting-through of a discharge spark gap, this will not already concurrently lead to the triggering of all other discharge circuits, the aspect of which has been clarified in amended Claim 1 as presented herewith.

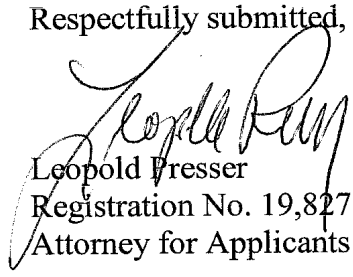
An effect of that type is also not rendered obvious by Robinson, et al., where, in that instance, by means of the synchronous triggering of the discharge spark gaps 27 through the trigger generator 9, there is forcibly carried out an absolutely concurrent discharge of the parallel-arranged pulse generators 12.

Due to the above-mentioned reasons, the subject matter of amended Claim 1 is not in any manner rendered obvious to one skilled in the art, even in combination with the disclosure of the secondary publication cited to Cronson, which merely describes a basic microwave generator, which fails to provide any of the claimed features of the present invention, as described.

Accordingly, in view of the foregoing comments and amendments, which are deemed to be fully responsive to the rejection of the claims, and which clearly and patentably distinguish over the art, irrespective as to whether the latter is considered singly or in combination, applicants respectfully submit that the claims are deemed to be in condition for allowance, and the early issuance of the Notice of Allowance by the Examiner is earnestly solicited.

However, in the event that the Examiner has any queries concerning the instantly submitted Amendment, applicants' attorney respectfully requests that he be accorded the courtesy of possibly a telephone conference to discuss any matters in need of attention.

Respectfully submitted,



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